

**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1.     **(Original)** A method for crystallizing a human beta secretase molecule or molecular complex comprising:  
          preparing purified human beta secretase in the presence of an inhibitor; and  
          crystallizing human beta secretase from a solution having a pH of about 3.5 to about 5.5.
2.     **(Currently Amended)** The method of claim 6[[1]] wherein the salt is selected from the group consisting of sodium chloride, ammonium sulfate, magnesium sulfate, lithium sulfate, and combinations thereof.
3.     **(Original)** The method of claim 1 wherein the solution has a pH of about 4.0 to about 4.7.
4.     **(Original)** The method of claim 1 wherein the solution comprises a buffer having a  $pK_a$  of about 3 to about 6.
5.     **(Currently Amended)** The method of claim 13[[1]] wherein the glycol is selected from the group consisting of PEG, PEG-MME, PEG-DME, polyoxyalkylenepolyamines, and combinations thereof.
6.     **(Original)** The method of claim 1 wherein the solution further comprises a salt.
7.     **(Original)** The method of claim 6 wherein the salt is present in a concentration of about 0.001 M to about 0.5 M.

8.     **(Original)** The method of claim 1 wherein the solution includes up to about 40% by weight organic solvent.
9.     **(Original)** The method of claim 8 wherein the organic solvent is DMSO.
10.    **(Original)** The method of claim 1 wherein the solution further comprises up to about 40% by weight ethylene glycol or glycerol.
11.    **(Original)** The method of claim 1 wherein the beta secretase is present at a concentration of about 1 mg/ml to about 80 mg/ml.
12.    **(Original)** The method of claim 1 wherein the inhibitor is present at a concentration of about 0.1 to about 10 mM.
13.    **(Original)** The method of claim 1 wherein the solution further comprises about 5% by weight to about 50% by weight of a glycol.
14.    **(Original)** The method of claim 13 wherein the glycol is a monomeric or polymeric glycol.
15.    **(Original)** The method of claim 1 wherein the human beta secretase is isolated from mammalian cells.
16.    **(Original)** The method of claim 15 wherein the mammalian cells are CHO-K1 cells.
17.    **(Original)** The method of claim 15 wherein the mammalian cells are HEK 293 cells.

18. **(Currently Amended)** The method of claim 1 wherein the human beta secretase is isolated from insect cells as part of a a[[the]] Baculovirus expression system.
19. **(Withdrawn)** A crystal of beta secretase having the trigonal space group symmetry  $P3_221$ .
20. **(Withdrawn)** A crystal of beta secretase comprising a unit cell having dimensions of a, b, and c, wherein a is about 77 Å to about 147 Å, b is about 77 Å to about 147 Å, and c is about 77 Å to about 147 Å; and  $\alpha=\beta=90^\circ$ , and  $\gamma=120^\circ$ .
21. **(Withdrawn)** A crystal of beta secretase having the trigonal space group symmetry  $P3_221$  and comprising a unit cell having dimensions of a, b, and c, wherein a is about 77 Å to about 147 Å, b is about 77 Å to about 147 Å, and c is about 77 Å to about 147 Å; and  $\alpha=\beta=90^\circ$ , and  $\gamma=120^\circ$ .
22. **(Withdrawn)** The crystal of claim 21 having amino acid sequence SEQ ID NO:1.
23. **(Withdrawn - Currently Amended)** The crystal of claim 21[[22]] having amino acid sequence SEQ ID NO:1, with the proviso that at least one methionine is replaced with selenomethionine.
24. **(Withdrawn)** A method of producing human beta secretase, the method comprising expressing the human beta secretase in a mammalian cell line.
25. **(Withdrawn)** A method of producing human beta secretase, the method comprising expressing the human beta secretase in an insect cell line.